

PENDING CLAIMS  
U.S. Patent No. 6,432,391  
Attorney Docket No. 05725.0920-00000  
Filed: July 9, 2001

1. A product comprising:

a transparent anhydrous solid composition cosmetic composition comprising a physiologically acceptable medium,

wherein said physiologically acceptable medium comprises at least one odorous substance in an amount of at least 2 % by weight with respect to a total weight of the composition; and a liquid fatty phase comprising at least one polymer,

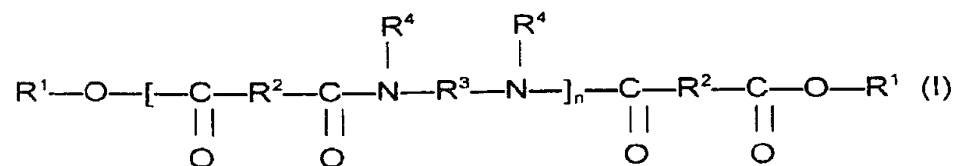
wherein said at least one polymer has a weight-average molecular mass ranging from 1,000 to 30,000, and comprises a) a polymer backbone comprising hydrocarbonaceous repeat units comprising at least one heteroatom and b) at least one fatty chain chosen from pendant and end fatty chains, wherein said at least one fatty chain is optionally functionalised; comprises from 12 to 120 carbon atoms; and is bonded to at least one of the hydrocarbonaceous repeat units.

2. The product according to Claim 1, wherein the liquid fatty phase comprises at least one polar oil and at least one nonpolar oil.

3. The product according to Claim 1, wherein said composition comprises at least one oil chosen from esters of C<sub>8</sub>-C<sub>24</sub> fatty acids and of at least one source of -OH chosen from polyols and C<sub>12</sub> to C<sub>26</sub> saturated fatty alcohols.

4. The product according to Claim 1, wherein said composition comprises octyldodecanol.

5. The product according to Claim 1, wherein at least one of the hydrocarbonaceous repeat units comprises at least one amide.
6. The product according to Claim 1, wherein the at least one polymer comprises the at least one fatty chain in an amount ranging from 40 to 98% of a total number of the repeat units with a heteroatom and of the at least one fatty chain.
7. The product according to Claim 1, wherein the at least one polymer comprises the at least one fatty chain in an amount ranging from 50 to 95% of a total number of the repeat units with a heteroatom and of the at least one fatty chain.
8. The product according to Claim 1, wherein the at least one fatty chain is bonded directly to at least one heteroatom in the polymer backbone.
9. The product according to Claim 1, wherein said at least one fatty chain comprises from 12 to 68 carbon atoms.
10. The composition according Claim 1, wherein the at least one polymer has a weight-average molecular mass ranging from 2,000 to 20,000.
11. The composition according Claim 1, wherein the at least one polymer has a weight-average molecular mass ranging from 2,000 to 10,000.
12. The product according to Claim 1, wherein the at least one polymer comprises at least one polymer of formula (I):



wherein n denotes a whole number of amide units, with the proviso that that the polymer of formula (I) comprises ester groups in an amount ranging from 10 to 50% of a total number of ester and amide groups;

each  $R^1$  is, independently, chosen from alkyl and alkenyl groups comprising at least 4 carbon atoms;

each  $R^2$  is, independently, chosen from  $C_4$  to  $C_{42}$  hydrocarbonaceous groups, with the proviso that at least 50% of the  $R^2$  groups are chosen from  $C_{30}$  to  $C_{42}$  hydrocarbonaceous group;

each  $R^3$  is, independently, chosen from organic groups comprising at least 2 carbon atoms, at least one hydrogen atom, and optionally at least one atom chosen from oxygen and nitrogen atoms; and

each  $R^4$  is, independently, chosen from a hydrogen atom,  $C_1$  to  $C_{10}$  alkyl groups, and a direct bond to one of  $R^3$  and another  $R^4$  such that the nitrogen atom to which both  $R^3$  and  $R^4$  are bonded forms part of a heterocyclic structure defined by  $R^4-N-R^3$ , with the proviso that at least 50% of the  $R^4$  groups are chosen from a hydrogen atom.

13. The composition according Claim 12, wherein each  $R^1$  is, independently, chosen from  $C_{12}$  to  $C_{22}$  alkyl groups.

14. The product according to Claim 12, wherein each  $R^2$  is, independently, chosen from groups comprising from 30 to 42 carbon atoms.

15. The product according to Claim 1, wherein the at least one polymer is chosen from copolymers of a  $C_{36}$  diacid condensed with ethylenediamine, wherein said copolymers are

esterified with at least one of cetylstearyl alcohol and stearyl alcohol; polyamide resins resulting from the condensation of an aliphatic dicarboxylic acid and of a diamine, wherein carbonyl and amine groups of adjacent individual units are condensed via an amide bond; polyamides of fatty acid dimers and of aliphatic diamines; and polyamides comprising dimeric fatty acids.

16. The product according to Claim 1, wherein the composition comprises the at least one polymer in an amount ranging from 0.5 to 50% of the total weight of the composition.

17. The product according to Claim 1, wherein the composition comprises the at least one polymer in an amount ranging from 5 to 40% of the total weight of the composition.

18. The product according to Claim 1, wherein the at least one odorous substance comprises at least one of a fragrance and an aroma of natural and synthetic origins, and mixtures thereof.

19. The product according to Claim 1, wherein the composition comprises the at least one odorous substance in an amount ranging from 2 to 15% by weight with respect to the total weight of the composition.

20. The product according to Claim 1, wherein the composition comprises the at least one odorous substance in an amount ranging from 3 to 12% with respect to the total weight of the composition.

21. The composition according Claim 1, wherein the composition comprises the liquid fatty phase in an amount of at least 20% by weight with respect to a total weight of the composition.

22. The product according to Claim 1, wherein the composition comprises the liquid fatty phase in an amount ranging from 20 to 88.5% by weight with respect to the total weight of the composition.

23. The product according to Claim 1, wherein said cosmetic composition is configured for at least one of scenting, caring for, treating, and making up keratinous substances.

24. The product according to Claim 1, wherein said composition has a hardness with a strength ranging from 5 to 600 grams.

25. The product according to Claim 1, wherein said product comprises one of a transparent stick and a cast product.

26. The product according to Claim 1, wherein said cosmetic composition is configured as a cosmetic scenting product.

27. The product according to Claim 1, wherein said cosmetic composition is colored.

28. The product according to Claim 1, wherein said cosmetic composition comprises at least one particulate component.

29. A cosmetic process for the scenting of the keratinous substances of human beings, comprising applying to a keratinous substances a product comprising a transparent anhydrous solid composition cosmetic composition comprising a physiologically acceptable medium,

wherein said physiologically acceptable medium comprises at least one odorous substance in an amount of at least 2 % by weight with respect to a total weight of the composition; and a liquid fatty phase comprising at least one polymer,

wherein said at least one polymer has a weight-average molecular mass ranging from 1,000 to 30,000, and comprises a) a polymer backbone comprising hydrocarbonaceous repeat units comprising at least one heteroatom and b) at least one fatty chain chosen from pendant and end fatty chains, wherein said at least one fatty chain is optionally functionalised; comprises from 12 to 120 carbon atoms; and is bonded to at least one of the hydrocarbonaceous repeat units.

30. A product comprising:

a transparent anhydrous solid composition cosmetic composition comprising a physiologically acceptable medium,

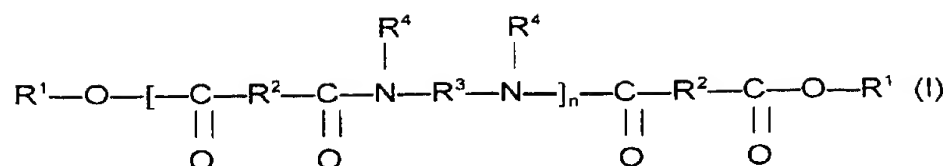
wherein said physiologically acceptable medium comprises at least one odorous substance in an amount of at least 2 % by weight; and a liquid fatty phase comprising at least one polyamide,

wherein said at least one polyamide has a weight-average molecular mass ranging from 1,000 to 30,000, and comprises a) a polymer backbone comprising amide repeat units and b) optionally at least one fatty chain chosen from pendant and end fatty chains, wherein said at least one fatty chain is optionally functionalised; comprises from 12 to 120 carbon atoms; and is bonded to at least one of the amide units.

31. The product according to Claim 30, wherein the liquid fatty phase comprises at least one polar oil and at least one nonpolar oil.

32. The product according to Claim 30, wherein said composition comprises at least one oil chosen from esters of C<sub>8</sub>-C<sub>24</sub> fatty acids and of at least one source of -OH chosen from polyols and C<sub>12</sub> to C<sub>26</sub> saturated fatty alcohols.

33. The product according to Claim 30, wherein said composition comprises octyldodecanol.
34. The product according to Claim 30, wherein the at least one polyamide comprises at least one pendant fatty chain bonded directly to at least one nitrogen atom of the amide repeat units.
35. The product according to Claim 30, wherein the at least one polyamide comprises at least one end fatty chain bonded to the polymer backbone via at least one ester group.
36. The product according to Claim 30, wherein the at least one polyamide comprises the at least one fatty chain in an amount ranging from 40 to 98% of a total number of the amide units and of the at least one fatty chain.
37. The composition according Claim 30, wherein the at least one polyamide comprises the at least one fatty chain in an amount ranging from 50 to 95% of a total number of the amide units and of the at least one fatty chain.
38. The product according to Claim 30, wherein the at least one polyamide comprises said at least one fatty chain and said at least one fatty chain comprises from 12 to 68 carbon atoms.
39. The composition according Claim 30, wherein the at least one polyamide has a weight-average molecular mass ranging from 2,000 to 20,000.
40. The composition according Claim 30, wherein the at least one polyamide has a weight-average molecular mass ranging from 2,000 to 10,000.
41. The product according to Claim 30, wherein the at least one polyamide is chosen from polyamide of formula (I):



wherein n denotes a whole number of amide units, with the proviso that that the polymer of formula (I) comprises ester groups in an amount ranging from 10 to 50% of a total number of ester and amide groups;

each  $R^1$  is, independently, chosen from alkyl and alkenyl groups comprising at least 4 carbon atoms;

each  $R^2$  is, independently, chosen from  $C_4$  to  $C_{42}$  hydrocarbonaceous groups, with the proviso that at least 50% of the  $R^2$  groups are chosen from  $C_{30}$  to  $C_{42}$  hydrocarbonaceous group;

each  $R^3$  is, independently, chosen from organic groups comprising at least 2 carbon atoms, at least one hydrogen atom, and optionally at least one atom chosen from oxygen and nitrogen atoms; and

each  $R^4$  is, independently, chosen from a hydrogen atom,  $C_1$  to  $C_{10}$  alkyl groups, and a direct bond to one of  $R^3$  and another  $R^4$  such that the nitrogen atom to which both  $R^3$  and  $R^4$  are bonded forms part of a heterocyclic structure defined by  $R^4-N-R^3$ , with the proviso that at least 50% of the  $R^4$  groups are chosen from a hydrogen atom.

42. The composition according Claim 41, wherein each  $R^1$  is, independently, chosen from  $C_{12}$  to  $C_{22}$  alkyl groups.



43. The product according to Claim 41, wherein each  $R^2$  is, independently, chosen from groups comprising from 30 to 42 carbon atoms.
44. The product according to Claim 30, wherein the composition comprises the at least one polyamide in an amount ranging from 0.5 to 50% of the total weight of the composition.
45. The product according to Claim 30, wherein the composition comprises the at least one polyamide in an amount ranging from 5 to 40% of the total weight of the composition.
46. The product according to Claim 30, wherein the at least one odorous substance comprises at least one of a fragrance and an aroma of natural and synthetic origins, and mixtures thereof.
47. The product according to Claim 30, wherein the composition comprises the at least one odorous substance in an amount ranging from 2 to 15% by weight with respect to the total weight of the composition.
48. The product according to Claim 30, wherein the composition comprises the at least one odorous substance in an amount ranging from 3 to 12% with respect to the total weight of the composition.
49. The product according Claim 30, wherein the composition comprises the liquid fatty phase in an amount of at least 20% by weight with respect to a total weight of the composition.
50. The product according to Claim 30, wherein the composition comprises the liquid fatty phase in an amount ranging from 20 to 88.5% by weight with respect to the total weight of the composition.

51. The product according to Claim 30, wherein said cosmetic composition is configured for at least one of scenting, caring for, treating, and making up keratinous substances.

52. The product according to Claim 30, wherein said composition has a hardness with a strength ranging from 5 to 600 grams.

53. The product according to Claim 30, wherein said cosmetic composition comprises one of a transparent stick and a cast product.

54. The product according to Claim 30, wherein said cosmetic composition is configured as a cosmetic scenting product.

55. The product according to Claim 30, wherein said cosmetic composition is colored.

56. The product according to Claim 30, wherein said cosmetic composition comprises at least one particulate component.

57. A cosmetic process for the scenting of the keratinous substances of human beings, comprising applying to a keratinous substances a product comprising a transparent anhydrous solid composition cosmetic composition comprising a physiologically acceptable medium,

wherein said physiologically acceptable medium comprises at least one odorous substance in an amount of at least 2 % by weight; and a liquid fatty phase comprising at least one polyamide,

wherein said at least one polyamide has a weight-average molecular mass ranging from 1,000 to 30,000, and comprises a) a polymer backbone comprising amide repeat units and b) optionally at least one fatty chain chosen from pendant and end fatty chains,

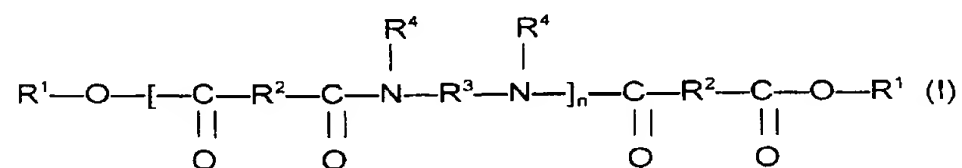
wherein said at least one fatty chain is optionally functionalised; comprises from 12 to 120 carbon atoms; and is bonded to at least one of the amide units

58. A method of controlling a persistence of at least one odorous substance on a cosmetic substrate comprising:

incorporating the at least one odorous substance in a cosmetic composition comprising a physiologically acceptable medium comprising at least one polymer in an amount effective for controlling the persistence of the at least one odorous substance, wherein said at least one polymer has a weight-average molecular mass ranging from 1,000 to 30,000; and comprises a) a polymer backbone comprising hydrocarbonaceous repeat units comprising at least one heteroatom and b) at least one fatty chain chosen from pendant and end fatty chains, wherein said fatty chains are optionally functionalised, comprise from 12 to 120 carbon atoms, and are bonded to the hydrocarbonaceous repeat units; and

applying said cosmetic composition to said cosmetic substrate.

59. The method according to Claim 58, wherein said at least one polymer is chosen from polymers of formula (I):



wherein n denotes a whole number of amide units, with the proviso that that the polymer of formula (I) comprises ester groups in an amount ranging from 10 to 50% of a total number of ester and amide groups;

each  $R^1$  is, independently, chosen from alkyl and alkenyl groups comprising at least 4 carbon atoms;

each  $R^2$  is, independently, chosen from  $C_4$  to  $C_{42}$  hydrocarbonaceous groups, with the proviso that at least 50% of the  $R^2$  groups are chosen from  $C_{30}$  to  $C_{42}$  hydrocarbonaceous group;

each  $R^3$  is, independently, chosen from organic groups comprising at least 2 carbon atoms, at least one hydrogen atom, and optionally at least one atom chosen from oxygen and nitrogen atoms; and

each  $R^4$  is, independently, chosen from a hydrogen atom,  $C_1$  to  $C_{10}$  alkyl groups, and a direct bond to one of  $R^3$  and another  $R^4$  such that the nitrogen atom to which both  $R^3$  and  $R^4$  are bonded forms part of a heterocyclic structure defined by  $R^4-N-R^3$ , with the proviso that at least 50% of the  $R^4$  groups are chosen from a hydrogen atom.

60. The method according to Claim 58, wherein said controlling comprises enhancing the persistence of the least one odorous substance on the cosmetic substrate.

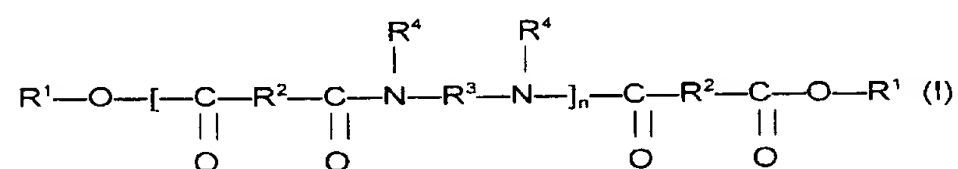
61. A method of controlling a persistence of at least one odorous substance on a cosmetic substrate comprising

incorporating the at least one odorous substance in a cosmetic composition comprising a physiologically acceptable medium comprising at least one polyamide in an amount effective for controlling the persistence of the at least one odorous substance,

wherein said at least one polyamide has a weight-average molecular mass ranging from 1,000 to 30,000, and comprises a) a polymer backbone comprising amide repeat units and b) optionally at least one fatty chain chosen from pendant and end fatty chains, wherein said pendant and end fatty chains are optionally functionalized pendant, comprise from 12 to 120 carbon atoms which, and are bonded to the amide units; and

applying said cosmetic composition to said cosmetic substrate.

62. The method according to Claim 61, wherein said at least one polymer is chosen from polymers of formula (I):



wherein n denotes a whole number of amide units, with the proviso that that the polymer of formula (I) comprises ester groups in an amount ranging from 10 to 50% of a total number of ester and amide groups;

each  $R^1$  is, independently, chosen from alkyl and alkenyl groups comprising at least 4 carbon atoms;

each  $R^2$  is, independently, chosen from  $C_4$  to  $C_{42}$  hydrocarbonaceous groups, with the proviso that at least 50% of the  $R^2$  groups are chosen from  $C_{30}$  to  $C_{42}$  hydrocarbonaceous group;

each  $R^3$  is, independently, chosen from organic groups comprising at least 2 carbon atoms, at least one hydrogen atom, and optionally at least one atom chosen from oxygen and nitrogen atoms; and

each  $R^4$  is, independently, chosen from a hydrogen atom,  $C_1$  to  $C_{10}$  alkyl groups, and a direct bond to one of  $R^3$  and another  $R^4$  such that the nitrogen atom to which both  $R^3$  and  $R^4$  are bonded forms part of a heterocyclic structure defined by  $R^4-N-R^3$ , with the proviso that at least 50% of the  $R^4$  groups are chosen from a hydrogen atom.

63. The method according to Claim 61, wherein said controlling comprises enhancing the persistence of the least one odorous substance on the cosmetic substrate.

**ABSTRACT OF THE DISCLOSURE**

A transparent and optionally colored solid cosmetic composition comprising, in a physiologically acceptable medium, at least one odorous substance in an amount effective for scenting a cosmetic substrate and a liquid fatty phase comprising at least one polymer, chosen from: (1) polymers with a weight-average molecular mass ranging from 1,000 to 30,000, comprising a) a polymer backbone having hydrocarbonaceous repeat units provided with at least one heteroatom and b) at least one fatty chain chosen from pendant and end fatty chains, where the at least one fatty chain is optionally functionalised; comprises from 12 to 120 carbon atoms; and is bonded to at least one of the repeat units; and (2) polyamides with a weight-average molecular mass ranging from 1,000 to 30,000, comprising a) a polymer backbone comprising amide repeat units and b) optionally at least one fatty chain chosen from pendant and end fatty chains, where the at least one fatty chain is optionally functionalised; comprises from 12 to 120 carbon atoms; and is bonded to at least one of the amide units.